

AMENDMENTS TO THE CLAIMS

1 - 67. (Cancelled)

68. (New) A semiconductor wafer treatment process, comprising the steps of: introducing a gas into a reaction chamber through a segmented shower head, independently controlling the flow of gas through different segments of the shower head to adjust the processing rates in areas of a wafer corresponding to the different segments, measuring the thickness of the wafer in the different areas, and adjusting the flow of gas through the segments in accordance with the thickness measurements to produce a wafer of predetermined thickness and uniformity.

69. (New) The process of Claim 68 including the step of increasing the flow of etchant gas to at least one of the segments to provide an increased etch rate in the corresponding area(s) of the wafer.

70. (New) The process of Claim 68 including the step of adding a diluent or etching suppressant gas to the processing gas to decrease the etch rate in at least one section of the wafer.

71. (New) The process of Claim 68 including the steps of adding a diluent or etching suppressant to the processing gas, and decreasing the flow of etchant gas through at least one of the segments to provide a decreased etch rate in the corresponding area(s) of the wafer.

72. (New) The process of Claim 68 including the step of interrupting the gas flow through at least one of the segments to provide a decreased etch rate in the corresponding area(s) of the wafer.

73. (New) A semiconductor wafer etching process, comprising the steps of: introducing an etching gas into a reaction chamber through a segmented shower head, independently controlling the flow of the etching gas through different segments of the shower head to adjust the etch rates in areas of a wafer corresponding to the different segments, measuring the thickness of the wafer in the different areas after only a

portion of the material has been removed in order to determine the effectiveness of the current flow rates on etch uniformity, adjusting the flow of gas through the segments in accordance with the thickness measurements to control the etch rates in the different areas, and further etching the wafer with the adjusted flow rates.

74. (New) A semiconductor wafer etching process, comprising the steps of: introducing an etching gas into a reaction chamber through a segmented shower head, independently controlling the flow of the etching gas through different segments of the shower head to adjust the etch rates in areas of a wafer corresponding to the different segments, measuring the thickness of the wafer in the different areas after etching is complete to determine the effectiveness of the flow rates on etch uniformity, and adjusting the flow rates in the different areas in accordance with the measured thicknesses for use on subsequent wafers.

75. (New) A process of depositing a film on a semiconductor wafer, comprising the steps of: introducing a gas into a reaction chamber through a segmented shower head, independently controlling the flow of gas through different segments of the shower head to adjust film deposition rates in areas of a wafer corresponding to the different segments, measuring the thickness and uniformity of the film in the different areas, and adjusting the flow of gas through the segments in accordance with the measurements to compensate for non-uniformities in the film deposited on the wafer.

76. (New) The process of Claim 75 wherein the gas flow through at least one of the segments is decreased to decrease the deposition rate in the corresponding area(s) of the wafer.

77. (New) The process of Claim 75 including the step of adding a diluent to the gas in at least one of the segments to decrease the deposition rate in the corresponding area(s) of the wafer.

78. (New) The process of Claim 75 including the steps of adding a diluent to the gas, and decreasing the flow gas in at least one of the segments to decrease the deposition rate in the corresponding area(s) of the wafer.

79. (New) The process of Claim 75 including the step of interrupting the gas flow through at least one of the segments to provide a decreased deposition rate in the corresponding area(s) of the wafer.

80. (New) A process of depositing a film on a semiconductor wafer, comprising the steps of: introducing a gas into a reaction chamber through a segmented shower head, independently controlling the flow of the etching gas through different segments of the shower head to adjust deposition rates in areas of a wafer corresponding to the different segments, measuring the thickness of the wafer in the different areas after only a portion of the film has been deposited in order to determine the effectiveness of the current flow rates on film uniformity, adjusting the flow of gas through the segments in accordance with the thickness measurements to control the deposition rates in the different areas, and depositing additional film material on the wafer with the adjusted flow rates.

81. (New) A process of depositing a film on a semiconductor wafer, comprising the steps of: introducing an etching gas into a reaction chamber through a segmented shower head, independently controlling the flow of the etching gas through different segments of the shower head to adjust deposition etch rates in areas of a wafer corresponding to the different segments, measuring the thickness of the wafer in the different areas after etching is complete to determine the effectiveness of the flow rates on deposition uniformity, and adjusting the flow rates in the different areas in accordance with the measured thicknesses for use on subsequent wafers.